

ABSTRACT

The present invention relates to a novel *Rhodococcus* bacterium and to a process of hydrolyzing a cyano group of a nitrile compound using a novel *Rhodococcus* bacterium to produce the corresponding carboxylic acid. The present invention also relates to a process of producing carboxylic acids, in particular cyano carboxylic acids using a transformant transformed with a plasmid containing a nitrilase gene, a nitrile hydratase gene and an amidase gene derived from *Rhodococcus* bacteria capable of exhibiting particularly excellent position selectivity for the cyano group of aromatic polynitrile compounds, to such a transformant, such a plasmid, to such genes, to a process of producing an enzyme using the transformant, and to enzymes obtained by the process. The carboxylic acids, in particular cyano carboxylic acids obtained by the present invention are useful as starting materials for the synthesis of drugs, agrochemicals, dyestuff and other chemicals.

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